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ABSTRACT

Two hundred forty-eight male and female subjects from United States, Mediterranean, Near East, and Far East cultures completed a touch avoidance measure in a study examining cultural differences in touching behavior. Factor analysis of the instrument yielded four factors: opposite sex, other-directed same sex, kissing, and self-directed same sex. Results indicated that Americans were less adverse to opposite sex and self-directed same sex touching than were Mediterraneans and were less adverse to opposite sex touching, kissing, and other-directed same sex touching than Far Easterners. The analysis also revealed that people from Near East cultures were less adverse to opposite sex touching than were Mediterranean or Far Eastern people, and less adverse to other-directed same sex touching and kissing than Far Easterners. An auxillary analysis of the effects of sex and age on the touch avoidant attitudes of Americans and Far Easterners revealed that females were less adverse than males to other-directed same sex touching, kissing, and self-directed same sex touching. For opposite sex touching there was a correlation between sex and culture. American males and females did not differ but Far Eastern females were more touch avoidant than Far Eastern males. American females were less touch avoidant than Far Eastern males or females on the opposite sex factor. No effects for age were detected. (Author/HTH)

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CROSS-CULTURAL DIFFERENCES IN SELF-REPORTED TOUCH AVOIDANCE

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CROSS CULTURAL DIFFERENCES IN SELF-REPORTED TOUCH AVOIDANCE

The use of certain communication behaviors in various social settings is affected by the cultural norms of the communicators. Communicators must recognize cultural differences in order to facilitate inoffensive and effective communication. This admonition is particularly relevant when the communication involves touching behavior, due to the highly personal nature of touch. Perceptions of appropriate touching behavior varied widely from culture to culture.

In order to more fully understand cultural differences in attitudes toward touching, this study investigated touch avoidance attitudes of American, Mediterranean, Near East, and Far East cultures. Specifically, attitudes toward same sex and opposite sex touching were examined .

Touch avoidance may be related to the norms which are associated with proxemic behavior (Pederson, 1973). Hall (1959, 1963) suggested that different cultures interpret and react to proxemic behaviors in different ways. Some cultures may be described as "Contact" cultures, in which the people face each other directly, interact at close distances, touch frequently, maintain eye contact, and speak loudly (Watson, 1970). Conversely, "Non-contact" cultures interact at greater distances, touch less frequently, and interact less directly than "Contact"cultures.

The combined literature on touching and proxemic behavior in intercultural communication consistently indicates behavioral differences between contact and non-contact cultures. For example,

Samovar, Porter, and Jain concluded from their review of the literature(1981, p. 175):

> The English, British-Americans, and Germans for instance, are cultures that employ very little touching in public. In contrast, Hispanic-Americans and peoples of Eastern European Jewish descent represent cultures with a great deal of tactile experiences. The Italian, French, and Arab cultures are also a highly tactile people.

Accordingly, Americans may be considered a non-contact culture, while Mediterranean people are contact communicators. Most of the intercultural communication research which has investigated touching behavior has examined differences between these two cultures.

Hall and Whyte (1959) studied differences between Arabs and Americans. Their finding, that Arabs interact at closer distances and touch more than Americans, was replicated by Watson and Graves (1966). Collett (1971) also confirmed the conclusion that Arabs were more contact oriented than Americans, and found that Arabs preferred interacting with people who adopt the communication style of the Arabs rather than adhering to their own cultural style. In a related study, Little (1968) concluded that members of Mediterranean cultures prefer to interact at closer distances than members of Northern European cultures.

Although fewer studies have examined attitudes toward same sex versus opposite sex touching in Mediterranean cultures, there are some indications that differences between American and Mediterranean attitudes of this type of touching do exist (Lomranz and Shapira, 1974). Generally, touching between men is considered more acceptable in Mediterreanean cultures (LaFrance and Mayo, 1978

a and b). Therefore it is hypothesized that:

> Hypothesis 1: Members of Mediterranean cultures will be less touch avoidant that Americans.

Research suggests that Oriental cultures are basically non-contact communicators, maintaining more distance and engaging in less touching than Americans. Barnlund (1975) found that Japanese reportedly used only half the amount of physical contact during interactions that North Americans used. The difference in use of contact behaviors was even more pronounced when dealing with members of the same sex rather than the opposite sex. Even when interacting with opposite sex friends, Americans reported using twice as much contact as Japanese. Similar results were obtained from observation studies of Japanese and Caucasian students Engebretson and Fullmer, ,1970). Sechrest (1969) also found that oriental mixed-sex couples touched significantly less often than Caucasian mixed-sex couples. Based on these results, it is hypothesized that:

> Hypothesis 2: Americans will be less touch avoidant than members of Far East cultures.

Very little research has been conducted on the touching behaviors or attitudes of Near East cultures, specifically Indian populations. Samovar, Porter, and Jain (1981) inidcate that the proxemic and touching behaviors of these cultures have not been researched. Therefore, the following question was posed:

> Research Question 1: How do the touch avoidance attitudes of Near Eastern cultures compare to the touch avoidance attitudes of Americans, Mediterranean and Far Eastern cultures?

The Touch Avoidance Measure (TAM) developed by Anderson and Leibowitz (1980) attempts to measure self-reported avoidance to touching behavior. The TAM was originally conceptualized as a measure of nonverbal communication apprehension. Factor analysis of the 18 item instrument produced a same sex touch avoidance measure (TAM_1) and an opposite sex touch avoidance measure (TAM_2). Anderson and Leibowitz (1980) reported high split-half reliabilities for both scales: .85 and .87 for TAM_1; and .83 and .82 for TAM_2. A copy of the 18 item TAM is included in Appendix 1.

The TAM scales have not been widely used. Lower (1979-80) studied touch avoidance in professional nursing students and reported a .75 reliability for TAM_1, and a .74 reliability coefficient for TAM_2. Lower (1979-80) did not factor analyze the TAM instrument.

In light of the research indicating cultural differences in attitudes toward touching behavior, and in cultural differences in verbal communciation apprehension (Klopf and Cambra, 1979), Anderson and Leibowitz (1980) suggested the use of the Touch Avoidance Measure in cross-cultural communication research.

Methods and Procedures

Subjects: The subjects used in this study were 248 male and female residents of a small midwestern community. Most of the subjects were students at a nearby university, although several subjects were friends or family members of students participating in the study.

Procedures: Original data was obtained from 279 students representing 39 different countries. Upon categorization of subjects

into major geographical areas, the researchers decided to include only the regions represented by at least 15 students. This decision yielded the following four geographical regions: America (N= 110), Mediterranean (N= 37), Near East (N= 19), and Far East (N= 82).

Subjects were given the 18 item Touch Avoidance Measure and were asked to designate their country of origin, age, and sex. The TAM was not presented as the separate TAM_1 and TAM_2 scales in order to allow for verification of the factor structures reported by Anderson and Leibowitz (1980). Questionnaires were completed in classes as well as at the home of some of the subjects.

Statistical Analysis: The data from the TAM was factor analyzed. The resultant factors were interpreted and served as the dependent variables in a multivariate analysis of variance. Univariate analyses of variance and Dunn's post hoc procedure were used for the interpretation of significant results. Cronbach's alpha reliability coefficient was calculated for each of the dependent variables.

Results

The results of the factor analysis yielded four factors, disconfirming the results of Anderson and Leibowitz (1980). For an item to be considered loading on a factor, the guidelines presented by Anderson and Leibowitz (1980, p. 96) were followed: 1) An item must have a loading of .60 on a primary factor and no loading of .40 or above on a secondary factor; 2) At least two items must be loaded on a factor;and 3) Each factor meeting criteria 1 and 2 must attain an internal reliability estimate of .75 or higher.

The factor analysis yielded four viable dimensions composed of 13 of the original 18 TAM items. Factor 1, an opposite sex factor (OPSX), closely resembled the TAM_2 instrument. Seven items (5, 7, 8, 10, 14, 15, and 17) loaded on this factor. Internal reliability for Factor 1 was .87 . Factors 2, 3, and 4 tapped into same sex touch avoidant behaviors, although each factor was conceptually distinct. Factor 2 represented an other-directed same sex dimension (OSSX). This factor contained only two items (4 and 18) and had an internal reliability of .76. Factor 3, a kissing factor (KISS),consisted of two items (11 and 16), and had an internal reliability of .81 . Factor 4 represents a self-directed same sex touching dimension (SSSX). Factor 4 consisted of two items (9 and 12) and has an internal reliability of .75 . The factor loadings are presented in Table 1.

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Insert Table 1 about here
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In general, the factors did not account for an appreciable amount of total variance. The variance explained by each factor was: Factor 1 - 3.9%, Factor 2 - 2.0%, Factor 3 - 1.6%, and Factor 4 - 2.1%. The variance explained by the original factors in Anderson and Leibowitz (1980) were not reported.

The four factors were used as dependent variables in a multivariate analysis of variance using Wilk's Lambda criterion. Results of the MANOVA reported a significant effect for culture, $F(12, 637) = 17.28$, $p < .0001$. Univariate ANOVAs performed on the

separate factors provided interpretation of results. The results of the ANOVAs are presented in terms of each distinct factor, and Dunn's post hoc procedure determined the differences between the cultural groups. The relevant means for the cultural groups on each factor are presented in Table 2.

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Insert Table 2 about here
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A significant main effect for culture was found in the ANOVA results of the opposite sex factor, $F(3, 244) = 54.54$, $p < .0001$, $R^2 = .40$. The OPSX ANOVA results are presented in Table 3.

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Insert Table 3 about here
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Dunn's post hoc procedure revealed that Americans ($\bar{X} = 11.04$) are significantly ($p < .01$) less touch avoidant when dealing with members of the opposite sex than people from Mediterranean ($\bar{X} = 17.38$) or Far East Cultures ($\bar{X} = 18.55$). People from Near East cultures ($\bar{X} = 12.63$) were less touch avoidant than people from Mediterranean or Far East cultures.

ANOVA results from the other-directed same sex factor, presented in Table 4, indicated a significant main effect for culture, $F(3, 244) = 4.56$, $p < .005$, $R^2 = .06$.

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Insert Table 4 about here
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Post hoc comparisons revealed that members of Far Eastern cultures ($\bar{X}$= 5.07) were significantly more adverse to other-directed same sex touching than Americans ($\bar{X}$= 4.25) or members of Near Eastern cultures ($\bar{X}$= 4.11). No significant differences were found for other-directed same sex touch avoidance between Americans and Mediterranean or between Mediterranean and Far East cultures.

Results of the ANOVA for the Kissing Factor, presented in Table 5, also revealed a significant effect for culture, $F(3, 244)= 11.98$, $p<.0001$, $R^2= .13$.

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Insert Table 5 about here
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Dunn's procedure indicated that Americans ($\bar{X}$=6.44) were less avoidant of kissing behavior than people from the Far East ($\bar{X}$= 7.89) or from the Near East ($\bar{X}$= 7.58). People from the Far East were significantly more adverse to kissing behavior than people from Near East or Mediterranean cultures.

Finally, ANOVA results for self-directed same sex touching, presented in Table 6, revealed a significant main effect for culture, $F(3,244)= 4.95$, $p<.005$, $R^2= .06$.

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Insert Table 6 about here
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Post Post hoc procedures revealed that people from Mediterranean cultures ($\bar{X}$= 6.81) were more touch avoidant than Americans ($\bar{X}$= 5.44),

people from the Near East ($\bar{X}$= 6.31) or people from the Far East ($\bar{X}$= 5.97).

Hypothesis 1 suggested that people from Mediterranean cultures would be less touch avoidant than Americans. Results of the Univariate analyses of variance rejected this hypothesis. In fact, the converse was true. Americans were less adverse to opposite sex, and self-directed same sex touching than members of Mediterranean cultures.

Hypothesis 2 suggested that Americans would be less touch avoidant than members of Far Eastern cultures. This hypothesis was strongly confirmed. Results of Univariate ANOVAs and post hoc comparisons indicated that Americans were less avoidant to opposite sex touching, other-directed same sex touching, and kissing, than members of Far Eastern cultures. No significant differences were found between self-directed same sex touching of Americans and Far Easterners.

In terms of the touch avoidance attitudes of Near East cultures, results of univariate ANOVAs indicate some significant effects. Specifically, people from Near East cultures were less adverse to opposite sex touching than members of Mediterranean or Far East cultures; were less adverse to other-directed same sex touching and kissing than members of Far East cultures; and were less adverse to self-directed same sex touching than people from Mediterranean cultures.

An auxiliary analysis was performed on the effects of sex and age with the American and Far East samples. The Near East sample included only 2 females and the Mediterranean sample included only 6 females. These extremely small samples prevented inclusion of these cultural groups in the analysis of sex effects. Age was categorized into two groups: 1) 18-24, and 2) 25 and older. Both the Near East and Mediterranean samples had extremely small n's in the second condition and were therefore excluded from the analysis of age effects.

Females and males are socialized in different ways, resulting in different expectations for behavior. Females are generally less touch avoidant than males. Research indicates that females are more accessible to touch (Jourard and Rubin, 1968; Henley, 1977), are touched more often (Watson, 1975), touch more often (Silverman, Pressman, and Bartel, 1973), and are more favorable to being touched (Fisher, Rytting, and Heslin, reported in Anderson and Leibowitz, 1980) than males.

Anderson and Leibowitz (1980) investigated the effects of sex on touch avoidant behavior using the TAM_1 and the TAM_2. They found that males were more adverse to same sex touching than females, while females were more adverse to opposite sex touching than males.

The interaction between cultural and sex effects with regard to touch avoidance has not been investigated. However, the initial results of this study indicate that Americans are less touch avoidant than Far Easterners. Based on the general literature concerning sex differences in touch behavior and the initial results of this

study, the following hypotheses were advanced:

> Hypothesis 3: Females will be less touch avoidant to same sex touching; more avoidant to opposite sex touching
>
> Hypothesis 4: American females will be less touch avoidant than either American males, Far Eastern females or Far Eastern males.

The use of touch and attitudes toward touch vary throughout a person's life. The age of a person signifies their role and status and therefore dictates appropriate touching behavior (Mosby, 1978). People are less likely to engage in touching behavior as they grow older (Morris, 1971; Scheflen, 1972) and are less likely to be touched when they become elderly (Mosby, 1978). Anderson and Leibowitz (1980) found that age and avoidance of touching opposite sex persons was positively correlated. Due to the paucity of research concerning the interaction of culture and age in manifestations of touch avoidance the following research question was advanced:

> Research Question 2: Will a person's age affect their attitudes toward touch avoidance?

Results

The four factors were used as dependent variables in a multivariate analysis of variance using Wilk's Lambda criterion to assess the effects of sex and age on touch avoidance of American and Far Eastern subjects. The MANOVA indicated a main effect for sex, $F(4, 179) = 24.00$, $p < .0001$; and a first order interaction effect

for culture by sex, $F(4, 179) = 7.34$, $p < .0001$. Univariate ANOVAs and Dunn's procedure were agin used to interpret the results. Relevant means for factor scores by culture and sex are presented in Table 7. Means for age are not reported due to the lack of significant effects indicated for age of the subject.

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Insert Table 7 about here
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Results of the ANOVA for the opposite sex touch avoidance factor (OPSX, $R^2 = .60$), presented in Table 8, revealed a main effect for sex, $F(1, 182) = 36.99$, $p < .0001$; and a first order interaction effect for culture by sex, $F(1, 182) = 21.04$, $p < .0001$. Males ($\bar{X}$=13.25) were less adverse to opposite sex touching than females ($\bar{X}$= 14.96). Dunn's post hoc procedure indicated that both American males ($\bar{X}$=10.50) and American females ($\bar{X}$= 11.30) were less adverse to opposite sex touching than either Far Eastern males ($\bar{X}$= 15.50) or Far Eastern females ($\bar{X}$= 22.08). There was no significant difference between the opposite sex touch avoidant attitudes of American males and females; although Far Eastern males were significantly less adverse to opposite sex touching than Far Eastern females.

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Insert Table 8 about here
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The ANOVA results for the Other-directed same sex touching factor (OSSX, $R^2 = .19$), presented in Table 9, reveal a significant main effect for sex, $F(1, 182) = 16.46$, $p < .0001$. Females ($\bar{X}$= 4.11) were significantly less touch avoidant than males ($\bar{X}$= 5.29).

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Insert Table 9 about here
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The ANOVA results of the Kissing Factor (R^2= .37), presented in Table 10, indicate a main effect for sex, F(1, 182)= 43.07, p<.0001. Again, females ($\bar{X}$= 6.23) were less adverse to kissing behavior than males ($\bar{X}$= 8.21).

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Insert Table 10 about here
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The ANOVA results for the self-directed same sex touching factor (SSSX, R^2= .09), presented in Table 11, also indicate a main effect for sex, F(1, 182)= 7.54, p<.01. As expected, females ($\bar{X}$= 5.32) were less avoidant to self directed same sex touching than males ($\bar{X}$= 6.15).

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Insert Table 11 about here
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Hypothesis 3 suggested that females will be less touch avoidant than males to same sex touching and more touch avoidant to opposite sex touching. While the first part of the hypothesis was supported by the data, an interaction between sex and culture on the opposite sex factor indicated that only Far Eastern females were more touch avoidant than Far Eastern males. American males and females did not differ significantly on attitudes toward opposite sex touching.

Hypothesis 4 suggested that American females will be less touch avoidant than either American males, Far Eastern males or Far Eastern females. The ANOVA results of the opposite sex factor partially confirm this hypothesis. American females were significantly less touch avoidant than either Far Eastern males or Far Eastern females.

Research question 2 inquired about the effect of age on touch avoidance attitudes. Results indicated no significant effects for the age of a subject on self-reported touch avoidance.

Discussion

Contrary to expectations, Mediterraneans did not report less touch avoidance than Americans. In fact, the results of this investigation revealed the opposite effect. Mediterranean individuals were more touch avoidant to opposite sex touching and self directed same sex touching than the Americans. In the case of opposite sex touch avoidance, the differences obtained may be due to the sexual norms of the respective regions, which tend to be more restrictive in Mediterranean countries. For the same sex measure the finding that Americans are less touch avoidant is considerably more surprising. One possible explanation might be that the attitudes of college age Americans toward same sex touching have become more favorable. It is also possible that the self-reported differences obtained are not indicative of actual touch-

ing behavior.

As expected, Far Easterners were the most touch avoidant cultural group. With the exception of the self directed same sex touch avoidance measure, Far Eastern individuals reported more touch avoidance than Mediterraneans, Americans, or Near Easterners. Thus, the findings appear to support the identification of Far Eastern countries as "non-contact" cultures.

Near Eastern individuals were less touch avoidant than Mediterraneans and Far Easterners to opposite sex touching and less touch avoidant than Far Easterners to same sex touching. The generalizability of these findings is limited due to the preponderance of Indians in the Near Eastern group.

Although females were less touch avoidant than males on the same sex measures, sex differences on the opposite sex dimension were limited to the Far Eastern group. This conflicts with Anderson and Leibowitz's (1980) finding that females were more adverse to opposite sex touching than males. The interaction obtained in this study might reflect the influence of the "Women's Movement" which has been a more potent force in America than in the Far East.

Age did not affect attitudes toward touch avoidance. This may be due, in part, to the limited age range of subjects surveyed in this investigation. More research is needed which explores the effect of aging on attitudes toward same and opposite sex touching.

The results of this study appear to suggest that touch avoidance is more complex than previously reported. In particular, same sex touch avoidance seems to be multidimensional consisting of attitudes toward the type of touch employed (e.g. kissing) and the source of the touching (self or other initiated).

Future research on self reported differences among various cultures to touch avoidance should: 1) examine differences among nationalities rather than geographical regions; 2) explore same sex touch avoidance as a multidimensional construct; and 3) continue to investigate interactions between culture,age and sex that explain differences in aversion to touching and being touched by same and opposite sex individuals.

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Table 1
Factor Loadings of TAM Items

Item #	Factors				
	1	2	3	4	5
1	.13	.18	.07	.53	.14
2	.37	-.14	.09	.72*	-.12
3	-.06	.38	.06	.56	.36
4	.12	.80*	.09	.01	.01
5	.73*	.07	.12	.38	.04
6	.26	.37	.15	.26	.37
7	.62*	.29	.23	-.19	.07
8	.76*	.15	.05	.01	-.13
9	.13	.03	.03	.01	.84*
10	.64*	-.31	.05	.25	.14
11	-.04	.04	.72*	.15	.43
12	.11	.26	.24	.10	.69*
13	-.01	.62*	.16	.17	.47
14	.75*	.03	.08	.00	.16
15	.82*	.05	.03	.14	.06
16	.08	.21	.84*	.03	-.11
17	.71*	-.07	-.05	.22	.13
18	-.05	.59	.39	.17	.25
Variance Explained: N=247	3.89	2.04	1.59	1.58	2.06

* Items that loaded on a particular factor

Table 2
Means for Touch Avoidance
Factor Scores by Cultural Group

Cultures	Factors			
	OPSX	KISS	SSSX	OSSX
Americans N= 110	11.04	6.44	5.44	4.25
MidEast/ Medit. N=37	17.38	6.51	6.81	4.84
Near East N= 19	12.63	7.58	6.32	4.11
Far East N= 82	18.55	7.89	5.97	5.07
Total $\bar{X}$:	14.59	7.02	5.89	4.57
SD:	4.31	1.79	1.98	1.68

Table 3
ANOVA Results for Opposite Sex
Factor by Culture

Source	df	MS	F	p
Culture	3	1011.5884	54.54	.0001
Error	244	18.5462		
Total	247	30.6075		

Table 4
ANOVA Results for Self Directed
Same Sex Factor by Culture

Source	df	MS	F	p
Culture	3	19.3507	4.95	.005
Error	244	3.9131		
Total	247	4.1006		

Table 5
ANOVA Results for Kissing Factor
by Culture

Source	df	MS	F	p
Culture	3	38.3313	11.98	.0001
Error	244	3.2006		
Total	247	3.6273		

Table 6
ANOVA Results for Other Directed
Same Sex Factor by Culture

Source	df	MS	F	p
Culture	3	12.9757	4.56	.005
Error	244	2.8473		
Total	247	2.9704		

Table 7
Relevant Means for Touch Avoidance
Factor Scores by Culture and Sex

	Factors							
	OPSX		SSSX		KISS		OSSX	
Sex:	Male	Fem.	Male	Fem.	Male	Fem.	Male	Fem.
Culture								
American	10.50	11.30	5.89	5.22	7.97	5.69	4.89	3.93
Far East	15.50	22.08	6.36	5.53	8.41	7.29	5.61	4.45
Sex Tot:	13.25	14.96	6.15	5.32	8.21	6.23	5.29	4.11
Culture Tot:								
American:	11.04		5.44		6.44		4.25	
Far East:	18.55		5.98		7.89		5.07	

Table 8
Results of ANOVA for OPSX by
Culture, Sex, and Age

Source	df	MS	F	p
Culture (C)	1	694.1276	53.22	.0001
Sex (S)	1	482.4172	36.99	.0001
Age (A)	2	6.3058	.49	.61
C x S	1	274.4387	21.04	.0001
C x A	2	16.1558	1.24	.29
S x A	1	.6483	.05	.82
C x S x A	1	3.6974	.28	.59
Error	182	13.0419		
Total	191	400.6521		

Table 9
Results of ANOVA for SSSX by
Culture, Sex, and Age

Source	df	MS	F	p
Culture (C)	1	3.9121	1.13	.29
Sex (S)	1	26.2026	7.54	.006
Age (A)	2	6.5247	1.88	.16
C x S	1	.2565	.07	.79
C x A	2	4.6216	1.33	.27
S x A	1	3.0913	.89	.35
C x S x A	1	.3948	.11	.74
Error	182	3.4730		
Total	191	7.1750		

Table 10
Results of ANOVA for KISS by
Culture, Sex, and Age

Source	df	MS	F	p
Culture (C)	1	24.2332	9.87	.002
Sex (S)	1	105.7987	43.07	.0001
Age (A)	2	3.0575	1.24	.29
C x S	1	9.0565	3.69	.06
C x A	2	.3604	.15	.86
S x A	1	.2359	.10	.76
C x S x A	1	.8148	.33	.57
Error	182	2.4562		
Total	191	28.8148		

Table 11
Results of ANOVA for OSSX by
Culture, Sex, and Age

Source	df	MS	F	p
Culture (C)	1	7.5330	2.99	.08
Sex (S)	1	41.3939	16.46	.0001
Age (A)	2	5.2523	2.09	.13
C x S	1	.1529	.06	.81
C x A	2	6.1316	2.44	.09
S x A	1	.5768	.23	.63
C x S x A	1	.9442	.38	.54
Error	182	2.5152		
Total	191	11.8173		